

REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicants have amended claims 1, 3-6, 11, 14-17, and 22; claims 2, 7-10, 12, 13, 18-21, and 23-26 have been canceled; and claims 27-29 have been added. Accordingly, claims 1, 3-6, 11, 14-17, 22, and 27-29 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 102(e)

In paragraph 2 of the Office Action, the Examiner rejected claims 1-3, 10-14, 21, 22, 25 and 26 under 35 U.S.C. § 102(e) as being anticipated by Haberman, et al. (US 6,035,197). Of these claims, claims 2, 10, 21, 25, and 26 have been canceled. The Applicants have amended the remaining claims to better distinguish the claimed invention from Haberman. The Examiner's consideration of the amended claims is respectfully requested.

The Examiner cited passages from Haberman relating to the prior art method of handling an active set of base stations and a candidate set. In a typical scenario, if the maximum allowed number of base stations has not been added to the active set, a base station in the candidate set is added to the active set if the candidate base station has a signal strength higher than a threshold level set at some level below the best base station in the active set. If the active set already has the maximum allowed number of base stations, a base station in the candidate set will replace the worst base station in the active set if the candidate base station has a signal strength higher than a threshold level set at some level above the worst base station in the active set.

The claimed invention goes beyond Haberman through its process of dividing the digital cells in the network into groups based either on their relationship to a geographical area or their relationship to radio network controllers. As discussed in the specification in regards to FIG. 1, it is preferable for a mobile station in a town, for example, to establish macro-diversity radio links with other cells in the town rather than with cells, for example, along an adjacent highway. The radio resources in the highway

cell are needed for travelers on the highway. By designating the town cells as a first group with a lower required signal quality threshold, and designating the highway cells as a second group with a higher required signal quality threshold, the network can control a mobile station in the town to select only town cells for macro-diversity links. Likewise, for a mobile station on the highway, the situation would be reversed, and the network would control the mobile station to select highway cells for macro-diversity links.

Claim 1 has been amended to recite:

1. A mobile cellular telecommunications network employing macro-diversity, wherein a mobile station can establish a plurality of simultaneous radio links with a plurality of digital cells in the network, said network comprising:

means for dividing the plurality of digital cells of the network into a plurality of groups, said plurality of groups including:

a first group of geographically related digital cells, wherein the mobile station has an established radio link with at least one digital cell in the first group; and

a second group of geographically related digital cells, wherein the mobile station does not have an established radio link with any of the digital cells in the second group;

means for establishing additional radio links between the mobile station and other digital cells in the first group upon meeting a first link quality threshold; and

means for establishing a radio link between the mobile station and a digital cell in the second group only upon meeting a second link quality threshold that is higher than the first link quality threshold;

wherein, when the mobile station establishes macro-diversity radio links within a first geographical area related to the first group of digital cells, the mobile station is more likely to establish additional radio links only with digital cells in the first geographical area.

A network that controls the geographical area where the mobile station establishes macro-diversity links is not taught or suggested by Haberman. Therefore, the allowance of amended claim 1 is respectfully requested.

Claims 3 and 11 depend from amended claim 1 and recite further limitations in combination with the novel elements of claim 1. Therefore, the allowance of claims 3 and 11 is respectfully requested.

Method claim 12 has been canceled and replaced by new method claim 28. Method claim 28 corresponds to amended network claim 1 and recites similar limitations not taught or suggested by Haberman. Therefore, the allowance of new claim 28 is respectfully requested for the same reasons.

Claims 14 and 22 depend from new claim 28 and recite further limitations in combination with the novel elements of claim 28. Therefore, the allowance of claims 14 and 22 is respectfully requested.

New claim 27 is a network claim similar to amended claim 1 except that the network divides the digital cells into groups based on their relationship to radio network controllers (RNCs). As discussed in the specification in regards to FIG. 1, it is preferable for a mobile station having radio links to cells controlled by a first RNC to establish macro-diversity radio links with other cells controlled by the same RNC rather than with cells controlled by a second RNC. By designating the cells controlled by the first RNC as a first group with a lower required signal quality threshold, and designating the cells controlled by the second RNC as a second group with a higher required signal quality threshold, the network can control a mobile station having radio links to cells controlled by the first RNC to establish macro-diversity radio links only with other cells controlled by the first RNC. Likewise, for a mobile station having radio links to cells controlled by the second RNC, the situation would be reversed, and the network would control the mobile station to cells controlled by the second RNC for macro-diversity links.

A network that controls a mobile station to establish macro-diversity links only with cells controlled by the same RNC is not taught or suggested by Haberman. Therefore, the allowance of claim 27 is respectfully requested.

Method claim 29 corresponds to network claim 27 and recites similar limitations not taught or suggested by Haberman. Therefore, the allowance of new claim 29 is respectfully requested for the same reasons.

5.) Claim Rejections – 35 U.S.C. § 103(a)

In paragraphs 1-3 of the Office Action, the Examiner rejected claims 4 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Haberman in view of Achour, et

al. (WO 01/03464). The Applicants contend that the amendments to base claim 1 render dependent claim 4 allowable in view of Haberman and Achour. The combination of Haberman and Achour does not teach or suggest a network that controls the geographical area where the mobile station establishes macro-diversity links. Therefore, the allowance of claim 4 is respectfully requested.

Likewise, claim 15 depends from new claim 28 and recites further limitations in combination with the novel and unobvious elements of claim 28. The combination of Haberman and Achour does not teach or suggest a network that controls a mobile station to establish macro-diversity links only with cells controlled by the same RNC. Therefore, the allowance of claim 15 is respectfully requested.

In paragraph 4 of the Office Action, the Examiner rejected claims 5-7 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over Haberman in view of Lind, et al. (US 6,163,694). Of these claims, claims 7 and 18 have been canceled. The Applicants contend that the amendments to base claim 1 render dependent claims 5 and 6 allowable in view of Haberman and Lind. The combination of Haberman and Lind does not teach or suggest a network that controls the geographical area where the mobile station establishes macro-diversity links. Therefore, the allowance of claims 5 and 6 is respectfully requested.

Likewise, claims 16 and 17 depend from new claim 28 and recite further limitations in combination with the novel and unobvious elements of claim 28. The combination of Haberman and Lind does not teach or suggest a network that controls a mobile station to establish macro-diversity links only with cells controlled by the same RNC. Therefore, the allowance of claims 16 and 17 is respectfully requested.

In paragraph 5 of the Office Action, the Examiner rejected claims 8-9 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Haberman in view of Lind, and further in view of Rinne, et al. (US 6,574,473). Claims 8-9 and 19 have been canceled.

In paragraph 6 of the Office Action, the Examiner rejected claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Haberman in view of Rinne. Claim 20 has been canceled.

CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1, 3-6, 11, 14-17, 22, and 27-29.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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